CLAIMS

~~What is claimed is:~~

1. A network slice-based communication method, wherein the method comprises:

determining, by a network device, a network slice that a terminal is allowed to access and a network slice that the terminal is rejected to access;

determining, by the network device, a registration area of the terminal based on the network slice that the terminal is allowed to access and the network slice that the terminal is rejected to access; and

sending, by the network device, information about the registration area to the terminal.

2. The method according to claim 1, wherein the network slice that the terminal is rejected to access comprises a first network slice, the network slice that the terminal is allowed to access comprises a second network slice, and the registration area excludes a tracking area that supports both the first network slice and the second network slice, or the registration area excludes a tracking area of an access network device that supports both the first network slice and the second network slice.

3. The method according to claim 2, wherein the first network slice is a network slice not supported by the current tracking area.

4. The method according to claim 1, wherein the method further comprises:

receiving, by the network device via a first access network device in a first network, information about a network slice that the terminal requests to access, wherein the information about the network slice that the terminal requests to access comprises identification information of a first network slice not supported by a first tracking area and comprises identification information of a second network slice supported by the first tracking area, and the first tracking area is a tracking area of the first access network device;

the network slice that the terminal is allowed to access comprises the second network slice, and the network slice that the terminal is rejected to access comprises the first network slice; and

the registration area excludes a tracking area that supports the first network slice and the second network slice, or the registration area excludes a tracking area of an access network device that supports the first network slice and the second network slice.

5. The method according to claim 4, wherein the first network slice is a network slice that the terminal is allowed to access in the first network.

6. The method according to claim 4 or 5, wherein the method further comprises:

determining, by the network device, a network slice supported by the tracking area of the first access network device.

7. A network slice-based communication method, wherein the method comprises:

learning, by a terminal from a network device, that a first network slice is available in a second cell or a tracking area in which a second cell is located, wherein the first network slice does not belong to a network slice that the terminal is allowed to access in a tracking area in which a first cell is located, and a registration area of the terminal comprises the first cell and the second cell; and

initiating, by the terminal, a registration procedure for an application corresponding to the first network slice.

8. The method according to claim 7, wherein the first network slice is comprised in a network slice configured for the terminal in a first network.

9. The method according to claim 7 or 8, wherein the first network slice is comprised in a network slice that the terminal requests to access in the first cell.

10. The method according to any one of claims 7 to 9, wherein the method further comprises:

receiving, by the terminal, a cell identifier from the network device, wherein the cell identifier is used for the second cell.

11. The method according to claim 10, wherein the initiating, by the terminal, a registration procedure for an application corresponding to the first network slice comprises:

accessing, by the terminal, the second cell; and

initiating, by the terminal, the registration procedure for the application via the second cell.

12. The method according to any one of claims 7 to 11, wherein the initiating, by the terminal, a registration procedure for an application corresponding to the first network slice comprises:

determining, by the terminal, whether the first network slice is a network slice corresponding to the application in response to that a context of the terminal does not comprise a session used for the application and does not comprise a route selection policy used for the application; and

initiating, by the terminal, the registration procedure for the application when the first network slice is the network slice corresponding to the application.

~~13. The method according to any one of claims 7 to 12, wherein the method further comprises:~~

~~notifying, by the terminal, the network device that the terminal no longer requests to access the first network slice.~~

~~14. A network slice-based communication method, comprising:~~

~~determining, by a network device, a first network slice, wherein the first network slice does not belong to a network slice that a terminal is allowed to access in a tracking area in which a first cell is located, and a registration area of the terminal comprises the first cell and a second cell;~~

~~determining, by the network device when the terminal is handed over from the first cell to the second cell, that the first network slice is available in the second cell or a tracking area in which~~

the second cell is located; and

notifying, by the network device, the terminal that the first network slice is available in the second cell or the tracking area in which the second cell is located.

15. The method according to claim 14, wherein the notifying, by the network device, the terminal that the first network slice is available in the second cell or the tracking area in which the second cell is located comprises:

sending, by the network device, identification information of the first network slice to the terminal.

16. The method according to claim 15, wherein the notifying, by the network device, the terminal that the first network slice is available in the second cell or the tracking area in which the second cell is located further comprises:

sending, by the network device, a cell identifier to the terminal, wherein the cell identifier is used for the second cell.

17. The method according to any one of claims 14 to 16, wherein the first network slice is comprised in a network slice configured for the terminal in a first network.

18. The method according to any one of claims 14 to 17, wherein the first network slice is comprised in a network slice that the terminal requests to access in the first cell.

19. The method according to any one of claims 14 to 18, wherein the first cell belongs to a first access network device, and the second cell belongs to a second access network device; or

the first cell and the second cell belong to a first access network device.

20. The method according to claim 19, wherein the network device is a mobility management device.

21. The method according to claim 20, wherein the determining, by a network device, a first network slice comprises:

receiving, by the network device via the first cell, information about a network slice that the terminal requests to access, wherein the information about the network slice that the terminal requests to access comprises identification information of the first network slice;

determining, by the network device, a network slice that the terminal is allowed to access; and

learning, by the network device, that the first network slice does not belong to the network slice that the terminal is allowed to access in the first cell.

22. The method according to claim 19 or 20, wherein when the second cell belongs to the second access network device, a target access network device is the second access network device; or when the second cell belongs to the first access network device, a target access network device is the first access network device.

23. The method according to claim 22, wherein the determining, by the network device, that the first network slice is available in the second cell or the tracking area in which the second cell is located comprises:

querying, by the network device, a context of the target access network device, wherein the context of the target access network device indicates that a tracking area of the target access network device supports the first network slice, wherein the second cell is a cell in the tracking area of the target access network device.

24. The method according to claim 22 or 23, wherein the determining, by the network device, that the first network slice is available in the second cell or the tracking area in which the second cell is located comprises:

sending, by the network device, identification information of the first network slice to the target access network device; and

learning, by the network device from the target access network device, that the first network slice can access the terminal in the second cell.

25. The method according to any one of claims 22 to 24, wherein when the second cell belongs to the second access network device, the determining, by the network device, that the first network slice is available in the second cell or the tracking area in which the second cell is located comprises:

determining, by the network device when receiving a path switch request message from the second access network device, that the first network slice is available in the second cell; or

determining, by the network device when receiving a handover required message from the first access network device, that the first network slice is available in the second cell, wherein the handover required message comprises an identifier of the second access network device.

26. The method according to any one of claims 20 to 25, wherein the method further comprises:

storing, by the network device, the identification information of the first network slice;

receiving, by the network device, indication information from the terminal after the network device notifies the terminal that the first network slice is available in the second cell; and

deleting, by the network device, the identification information of the first network slice based on the indication information.

27. The method according to claim 26, wherein the indication information indicates that the terminal no longer requests to access the first network slice.

28. The method according to claim 19, wherein when the second cell belongs to the second access network device, the network device is the second access network device; or

when the second cell belongs to the first access network device, the network device is the

first access network device.

29. The method according to claim 28, wherein when the second cell belongs to the first access network device, the determining, by a network device, a first network slice comprises:

sending, by the network device to a mobility management device, information about a network slice that the terminal requests to access, wherein the information about the network slice that the terminal requests to access comprises identification information of the first network slice; and

learning, by the network device from the mobility management device, that the first network slice does not belong to a network slice that the terminal is allowed to access in the first cell.

3013. A network slice-based communication method, wherein the method comprises:

receiving, by a terminal, information about a registration area of the a terminal from a network device, wherein a network slice that the terminal is rejected to access comprises a first network slice, a network slice that the terminal is allowed to access comprises a second network slice, and the registration area excludes a tracking area that supports both the first network slice and the second network slice, or the registration area excludes a tracking area of an access network device that supports both the first network slice and the second network slice; and

re-initiatingperforming, by the terminal when the terminal moves into an excluded tracking area outside the registration area, a mobility registration update procedure to request to access the first network slice, wherein the excluded tracking area supports the first network slice.

3114. A communication apparatus, comprising: a processor, wherein

the processor is configured to read a program from a memory and run the program, to implement the method according to any one of claims 1 to 6 or implement the method according to any one of claims 14 to 29.

3215. A communication apparatus, comprising: a processor, wherein

the processor is configured to read a program from a memory and run the program, to implement the method according to any one of claims 7 to 13 12 or implement the method according to claim 3013.

3316. A program productcomputer program product comprising instructions, wherein when the instructions are run on a computer, the computer is enabled to perform the method according to any one of claims 1 to 3013.

3417. A computer -readable storage medium, wherein the computer-readable storage medium stores instructions, and when the instructions are run on a computer, a processor is enabled to perform the method according to any one of claims 1 to 3013.

3518. A computer program, wherein when the computer program runs on a communication apparatus, the method according to any one of claims 1 to 30 13 is performed.

~~36~~19. A communication apparatus, wherein the communication apparatus comprises: a logic circuit and an interface circuit;

the interface circuit is configured to obtain input information and/or output output information; and

the logic circuit is configured to perform the method according to any one of claims 1 to 6 ~~or configured to perform the method according to any one of claims 14 to 29~~, to process the information input through the interface circuit and/or generate the information output through the interface circuit.

~~37~~20. A communication apparatus, wherein the communication apparatus comprises: a logic circuit and an interface circuit;

the interface circuit is configured to obtain input information and/or output output information; and

the logic circuit is configured to perform the method according to any one of claims 7 to ~~13~~12, to process the information input through the interface circuit and/or generate the information output through the interface circuit, or configured to perform the method according to claim ~~30~~13.